1989

Nebraska Summary: S074 Case-IH 1896

Nebraska Tractor Test Laboratory
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SUMMARY OF OECD TEST 1218—NEBRASKA SUMMARY 074
CASE INTERNATIONAL 1896 DIESEL
12 SPEED
(CHASSIS S/N *178955122* and Higher)

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Fuel Consumption Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1000 rpm)					
101.6 *(75.8)*	2105	5.75 *(21.78)*	0.396 *(0.241)*	17.66 *(3.48)*	
Maximum Power (2 Hours)					
104.3 *(77.8)*	1879	5.69 *(21.55)*	0.381 *(0.232)*	18.32 *(3.61)*	
VARYING POWER AND FUEL CONSUMPTION					
101.6 *(75.8)*	2105	5.75 *(21.78)*	0.396 *(0.241)*	17.66 *(3.48)*	Air temperature
88.1 *(65.7)*	2145	5.19 *(19.63)*	0.411 *(0.250)*	17.00 *(3.35)*	81°F *(27°C)*
66.9 *(49.9)*	2165	4.37 *(16.53)*	0.457 *(0.278)*	15.33 *(3.02)*	Relative humidity
45.2 *(33.7)*	2194	3.54 *(13.41)*	0.547 *(0.333)*	12.74 *(2.51)*	17%
22.5 *(16.8)*	2227	2.69 *(10.18)*	0.835 *(0.508)*	8.38 *(1.65)*	Barometer
0 *(0)*	2252	1.94 *(7.34)*	— —	— —	30.42" Hg *(103 kPa)*

Maximum Torque 363.6 lb. ft *(493.0 Nm)* @ 1202 RPM
Maximum Torque Rise 24.6%

DRAWBAR PERFORMANCE
FUEL CONSUMPTION CHARACTERISTICS

Power Hp *(kW)*	Drawbar pull *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
Maximum Power—6th (3-1) Gear									
77.9 *(58.1)*	5890 *(26.2)*	4.96 *(7.99)*	2100	2.5	0.534 *(0.325)*	13.10 *(2.58)*	183 *(84)*	54 *(12)*	30.21 *(102.3)*
75% of Pull at Maximum Power—6th (3-1) Gear									
57.9 *(43.2)*	4205 *(18.7)*	5.16 *(8.31)*	2173	1.9	0.580 *(0.353)*	12.03 *(2.37)*	185 *(85)*	54 *(12)*	30.21 *(102.3)*
50% of Pull at Maximum Power—6th (3-1) Gear									
41.0 *(30.6)*	2945 *(13.1)*	5.23 *(8.42)*	2190	1.5	0.700 *(0.426)*	10.00 *(1.97)*	183 *(84)*	54 *(12)*	30.21 *(102.3)*
75% of Pull at Reduced Engine Speed—7th (2-3) Gear									
57.9 *(43.2)*	4205 *(18.7)*	5.18 *(8.33)*	1956	1.9	0.546 *(0.332)*	12.84 *(2.53)*	180 *(82)*	52 *(11)*	30.21 *(102.3)*
50% of Pull at Reduced Engine Speed—7th (2-3) Gear									
40.9 *(30.5)*	2945 *(13.1)*	5.23 *(8.42)*	1966	1.5	0.639 *(0.389)*	10.91 *(2.15)*	180 *(82)*	54 *(12)*	30.21 *(102.3)*

Location of Test: AFRC Institute for Engineering Research, Wrest Park, Silsde, Bedford, England MK45 4HS

Dates of Test: February-April, 1989

Manufacturer: J. I. CASE EUROPE Limited, Wheatley Hall Road, Doncaster, South Yorkshire, England DN2 4PG

FUEL AND OIL: Fuel No. 2 Diesel **Cetane No.** NA **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.8380 **Fuel weight** 6.977 lbs/gal *(0.836 kg/l)* **Oil SAE** 15W40 **Oil consumption for 10 hours** NA **Transmission and hydraulic lubricant** International Hytran fluid **Front axle lubricant** SAE 90 EP

ENGINE: Make Consolidated Diesel Corporation-Case Diesel **Type** six cylinder vertical with turbocharger **Serial No.** 210 35 34 1 **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 4.016" × 4.724" *(102.0 mm × 120.0 mm)* **Compression ratio** 17.5 to 1 **Displacement** 359 cu in *(5883 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** two paper cartridges **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat.

CHASSIS: Type front wheel assist **Serial No.** *178955122* **Tread width** rear 62.0" *(1574 mm)* to 82.7" *(2100 mm)* front 60.0" *(1524 mm)* to 89.0" *(2261 mm)* **Wheel base** 108.7" *(2760 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial *(3)* range operator controlled powershift **Nominal travel speeds mph *(km/h)*** first 1.95 *(3.14)* second 2.60 *(4.18)* third 3.25 *(5.23)* fourth 3.32 *(5.34)* fifth 4.42 *(7.12)* sixth 4.98 *(8.02)* seventh 5.53 *(8.90)* eighth 6.64 *(10.68)* ninth 8.30 *(13.35)* tenth 10.13 *(16.31)* eleventh 13.51 *(21.74)* twelfth 16.89 *(27.18)* reverse 3.25 *(5.23)*, 5.53 *(8.90)* 8.30 *(13.35)* **Clutch** multiple wet disc hydraulically power actuated by foot pedal **Brakes** multiple wet disc hydraulically power actuated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 1000 rpm at 2105 engine rpm and 540 rpm at 2125 engine rpm **Unladen tractor mass** 13105 lb *(5944 kg)*.

DRAWBAR PERFORMANCE
MAXIMUM POWER IN SELECTED GEARS

				2nd (1-2) Gear					
78.3	12475	2.36	2101	15.0	0.536	13.05	183	50	30.24
(58.4)	*(55.5)*	*(3.79)*			*(0.326)*	*(2.57)*	*(84)*	*(10)*	*(102.4)*
				3rd (1-3) Gear					
85.4	11445	2.80	1904	6.8	0.482	14.52	181	50	30.24
(63.7)	*(50.9)*	*(4.51)*			*(0.293)*	*(2.86)*	*(83)*	*(10)*	*(102.4)*
				4th (2-1) Gear					
85.3	11285	2.83	1884	6.6	0.483	14.47	183	50	30.24
(63.6)	*(50.2)*	*(4.56)*			*(0.294)*	*(2.85)*	*(84)*	*(10)*	*(102.4)*
				5th (2-2) Gear					
85.4	8205	3.90	1884	3.5	0.478	14.62	181	50	30.24
(63.7)	*(36.5)*	*(6.29)*			*(0.291)*	*(2.88)*	*(83)*	*(10)*	*(102.4)*
				6th (3-1) Gear					
87.3	7420	4.41	1878	3.1	0.465	15.02	183	52	30.24
(65.1)	*(33.0)*	*(7.09)*			*(0.283)*	*(2.96)*	*(84)*	*(11)*	*(102.4)*
				7th (2-3) Gear					
86.6	6610	4.92	1879	2.8	0.470	14.87	183	52	30.24
(64.6)	*(29.4)*	*(7.91)*			*(0.286)*	*(2.93)*	*(84)*	*(11)*	*(102.4)*
				8th (3-2) Gear					
84.8	5375	5.92	1876	2.3	0.482	14.52	183	54	30.21
(63.2)	*(23.9)*	*(9.53)*			*(0.293)*	*(2.86)*	*(84)*	*(12)*	*(102.3)*
				9th (3-3) Gear					
82.7	4160	7.46	1883	1.8	0.492	14.21	183	54	30.21
(61.7)	*(18.5)*	*(12.01)*			*(0.299)*	*(2.80)*	*(84)*	*(12)*	*(102.3)*

TRACTOR SOUND LEVEL WITH CAB	dB(A)
Maximum sound level	78.0
Bystander	NA

TIRES AND WEIGHT

		Tested Without Ballast
Rear Tires	—No., size, ply & psi *(kPa)*	Two 18.4R38; *; 16 *(110)*
Front Tires	—No., size, ply & psi *(kPa)*	Two 14.9R28; 6; 14 *(97)*
Height of Drawbar		14.5 in *(370 mm)*
Static Weight	—Rear	8645 lb *(3921 kg)*
	—Front	4460 lb *(2023 kg)*
	—Total	13105 lb *(5944 kg)*

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet manufacturers 3 point lift capacity claim of 6600 lbs *(2994 kg)*. The performance figures on this summary apply to chassis S/N *178955122* and up. The performance figures on this summary were taken from a test conducted under the OECD restricted standard test code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1218**, Nebraska Summary 074, May 24, 1990.

LOUIS I. LEVITICUS
Engineer-in-Charge

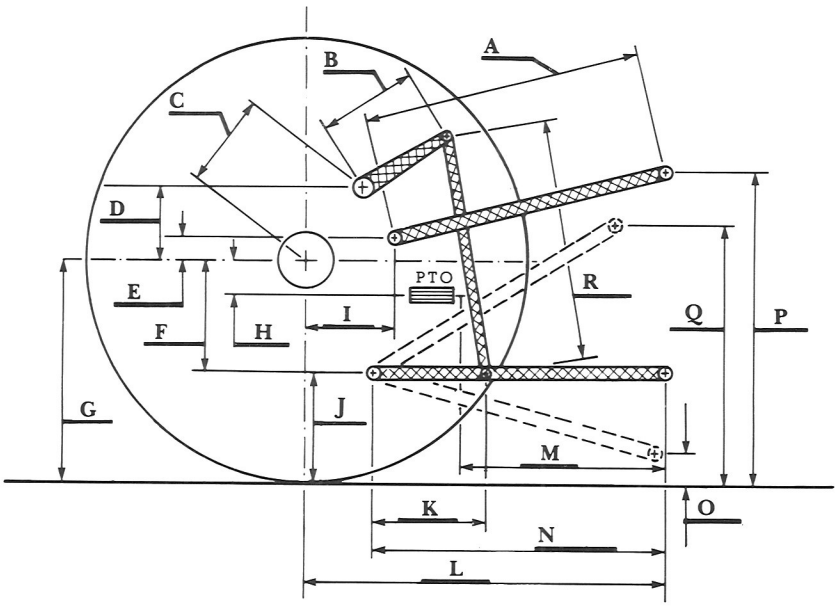
K. VON BARGEN
R. D. GRISSO
G. J. HOFFMAN
Board of Tractor Test Engineers

THREE POINT HITCH PERFORMANCE
(OECD Static Test)

CATEGORY: II
Quick Attach: None

Maximum Force Exerted Through Whole Range:	5710 lbs	*(25.4 kN)*
i) Opening pressure of relief valve:	NA	
Sustained pressure at open relief valve	2275 psi	*(157 Bar)*
ii) Pump delivery rate at minimum pressure:	23.6 GPM	*(89.5 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	23.0 GPM	*(87.0 l/min)*
Delivery pressure:	1770 psi	*(122 Bar)*
Power:	23.7 Hp	*(17.7 kW)*

HITCH DIMENSIONS AS TESTED—NO LOAD



	inch	*mm*
A	22.9	*581*
B	12.0	*305*
C	14.6	*372*
D	13.1	*333*
E	3.2	*80*
F	12.4	*315*
G	32.3	*820*
H	4.4	*112*
I	20.2	*514*
J	19.9	*505*
K	17.1	*434*
L	42.7	*1084*
*M	20.5	*521*
N	30.1	*765*
O	7.9	*200*
P	40.0	*1015*
Q	32.5	*825*
R	34.4	*875*

*to 1000 rpm shaft.

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